

# RICHARD SHI

3A Software Developer

## CONTACT

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github.com/richard-shi 🐙

## SKILLS

### Highly Proficient

Java, C, Python, Swift,  
Javascript

### Proficient

C++, Bash, Objective-C  
Postgres, Redis, Cassandra  
ARM Assembly, VHDL  
L<sup>A</sup>T<sub>E</sub>X

## EDUCATION

### Candidate for BSc in Computer Engineering

University of Waterloo  
Expected 2020

## CERTIFICATES

Oracle Certified Associate,  
Java SE 7 Programmer  
Summer 2015

## INTERESTS

### World History

Former President of high school  
Model United Nations Club;  
Actively organized lectures and  
mock debates for 30+ students  
for regional competitions

### Swimming

Strategy Games  
Mechanical Keyboards

## WORK EXPERIENCE

### Hubdoc

Sept 2017–Present

*Software Engineer*

- Created and optimized **hundreds** of **Node** microservices in a small team to automate financial data aggregation for accountants, earning **\$300,000+** in monthly revenue.
- Designed and upgraded a responsive data visualization dashboard with **Express**, **Backbone** and **PostgreSQL** for enabling advanced **analytics solutions**
- Improved microservice fetch success rate from **58% to 80%**

### Rave Media

Jan 2017–Apr 2017

*iOS Software Engineer*

- Built a novel asynchronous networking layer for the Rave social video app in **Swift**, reducing request latency by **14%**
- Worked in a small team to add **Rakuten** and **Netflix** support to the app
- Redesigned and optimized memory management of the app, reducing usage by **73%**
- Implemented new build system to cut build times by **84%** and enable Swift frameworks

### Blackberry

May 2016–Aug 2016

*Software Engineer - Camera Firmware*

- Developed Android OS Camera enhancements in **C++** including a dynamic performance adjuster, enabling **3X video resolution increase** at minimal performance loss
- Optimized Android camera drivers for the Blackberry **Priv**, **DTEK50** and **DTEK60**

## PERSONAL PROJECTS

### ReactionBot.js

reactionbot-js.herokuapp.com

*Node.js, Heroku, Express, PostgreSQL, Slack API, BotKit API, Dashbot API, WebSockets*

- Created a chatbot for Slack that allows users to share images and memes with more than **30 engaged teams** since release
- Uses the Slack API with **WebSockets** on **Express** and **Postgres**

### ESPower

git.io/vNVFh

*ESP8266 API, MicroPython, Python 3*

- Developed an IoT power bar exposed through a REST API using **Micropython** on the **ESP8266** microcontroller

### Blockchain.js

git.io/chainjs

*Node.js, Express.js*

- Designed a Blockchain implementation in **Node.js** with a Bitcoin-style Proof of Work algorithm and over-the-network chain distribution with **Express**

### Path Polo - Hack the North 2016

git.io/v9wlz

*Android API, Java, Pebble API, Google Maps API*

- Built an Android/Pebble watch app to guide the visually impaired using haptic feedback
- Directed users to locations chosen on Google Maps on phone or pebble app